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TESTING SELF-DETERMINATION THEORY IN BELGIAN STUDENTS: EFFECT OF SATISFACTION OF BASIC PSYCHOLOGICAL NEEDS BY TEACHING STYLE ON GENERAL WELL-BEING AND STUDY MOTIVATION

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ABSTRACT :

According to Self-Determination Theory, the satisfaction of the psychological needs autonomy, competence and relatedness, is said to be essential for human well-being worldwide. It also affects the quality of study motivation. This study aimed to investigate the influence on students' affect and study motivation. Moreover it was explored whether teaching style could impact the satisfaction or frustration of these needs.

KEYWORDS : *SDT – BPNT – Study Motivation – Teaching Style .*

INTRODUCTION

One of the most prominent motivational theories of this moment is the Self Determination Theory (SDT) of Edward Deci and Richard Ryan. The theory has been under development for nearly 40 years (Deci, 1971; Deci & Ryan, 1985, 2000). In the last decade, however, the literature on SDT has witnessed an exponential increase within a variety of disciplines (e.g. education, rising, education, parenting, coaching). SDT focuses on the interplay between the extrinsic forces acting on persons and the intrinsic motives and needs inherent in human nature. It is an integration of six motivational sub theories, under which the Basic Psychological Need Theory (BPNT), the Cognitive Evaluation Theory (CET) and the Organismic Integration Theory (OIT).

Three psychological basic needs: SDT starts from the core idea of the Basic Psychological Need Theory (BPNT). BPNT posits the existence of three psychological basic needs: autonomy, relatedness and competence. Autonomy is the need of psychological freedom. It refers to volition and the desire to self-organize experiences and behaviors that are concordant with one's integrated sense of self. *Relatedness* means belongingness. It refers to the feeling of being connected to others and to be loved and care for. Competence involves a sense of mastery or the experience of effectiveness in interacting with the environment.

The psychological needs can either be satisfied or frustrated. Satisfaction of the three needs facilitates well-being and psychological growth (Deci & Ryan, 2000). In the context of education, numerous studies have demonstrated a relation between need satisfaction and adaptive functioning such as autonomous study motivation and engagement (e.g. Taylor, Ntoumanis, Standage, & Spray, 2010).Need frustration in contrast,

would be associated with maladjustment, ill-being and even psychopathology (Vansteenkiste & Ryan, 2013). Previous studies in educational research revealed that need frustration in students is related to more controlled motivation and disengagement (e.g. Haerens et al., 2015).

The theory argues that the three needs are of equal importance. Further, the satisfaction of these psychological needs is said to be universally essential for human thriving. Indeed, Sheldon, Abad and Omoile (2009) found in Nigerian and Indian students that the three basic needs predicted life satisfaction in general and positive class evaluations in particular. Moreover, the balance among autonomy, relatedness and competence had positive associations with their life-satisfaction, independent of the individual amount of need-satisfaction. Chen et al. (2015a) investigated the need satisfaction, need frustration and need strength in adolescents across the Belgian, Chinese, and North-American and Peruvian culture. Their findings underscored the BPNT universality claim: the satisfaction of the basic needs represent essential nutrients for optimal functioning across different cultures and across individual differences in need strength. Even in cultures in which basic physical needs such as environmental safety (South-Africa) and financial safety (China) could not be guaranteed, the importance of this need satisfaction in the prediction of well-being was found (Chen et al., 2015b).

Autonomous versus controlled motivation: The difference between intrinsic and extrinsic types of motivation has been widely studied, and shed important light on both developmental and educational practices (Deci &Ryan, 1985).

Intrinsic motivation reflects the natural human propensity to act or to learn. That means that the activity as such is personally rewarding in the sense of inherently interesting or enjoyable.

Extrinsic motivation, however, is more complicated to explain. In general, it has long been argued that it is the opposite of intrinsic motivation in the sense that people act in order to get an extern reward. This kind of motivation was generally seen as more inferior, as it can be supposed that motivation will stop when the reward disappears. Moreover, for decades it was assumed that extrinsic rewards are even dangerous as they can undermine intrinsic motivation (cf. Lepper& Greene, 1978).

Since SDT however, both ideas, the inferiority of extrinsic motivation and the danger of rewards for undermining intrinsic motivation, are nuanced and put into a broader perspective.

First, in their Cognitive Evaluation Theory (CET), a second sub theory of SDT, Ryan and Deci (2000) stated that intrinsic motivation is derived from the basic psychological needs. Extrinsic rewards will only destroy intrinsic motivation when they undermine the feeling of autonomy and competence. More specifically, a reward can be informal (e.g. a reward informs you *that* you did a good job) or controlling (e.g. a reward is given *when* you do a good job). Only in the case of controlling rewards, they can undermine intrinsic motivation. In that sense, rewards are not necessarily pernicious.

Second, according to Ryan & Deci (2000), there are several qualities of extrinsic motivation: some of which do, indeed, represent impoverished forms of motivation. Nevertheless, some represent active, agentic states. In other words: the underlying attitudes and goals that give rise to these forms of action vary considerably in its relative autonomy and thus can either reflect external control or true self-regulation.

They explain the distinction between these several types of extern regulated behavior in the Organismic Integration Theory (OIT), which is a third sub theory of SDT. OIT distinguishes between autonomous and more controlled forms of motivation.

Autonomous motivation refers to motivation from within, by interests, curiosity, care or abiding values. It does not only implies intrinsic motivation as we described above, but also an identified form of motivation. *Intrinsically* motivated behaviors represent the prototype of self-determined activities: these are activities that people do naturally and spontaneously when they feel free to follow their inner interests. In the context of studying, it refers to studying out of interest and enjoyment. The goal of *identified* motivation is more external but still reflects autonomy. It means that students engage in studying because they understand why it is personally valuable or important to do so, whether they like it or not. From that

perspective, students can still be motivated to study a boring course because they realize it is important to know for their future job.

In contrast, introjected and external regulations are considered two relatively controlled forms of motivation. In general, *controlled motivation* refers to being motivated by external factors such as reward systems, evaluations, or the opinions they fear others might have of them. More specifically, *introjected regulation* occurs when students pressure themselves to engage in an activity because their self-worth is dependent upon their success or because they would feel ashamed or guilty for not putting effort in the activity. Finally, *external regulation* represents the most pressuring form of motivation and refers to putting effort into the lesson to comply with coercive demands of others, to avoid punishment, or to obtain contingently offered rewards.

Impact of teaching style on self-regulation: It is important to understand that the different quality types of motivation are posit on a continuum, which means that motivational drives can change over time (e.g. Litalien et al., 2017). For instance, it is possible that young children need rewards to learn ciphering (such as a competition award for a good test), but that after a while they get more autonomous motivated to learn it, because they realize it is necessary to know in a variety of applications. The coaching style of teachers can have an important influence on that transition.

Teachers that provide autonomy and structure, and create a warm environment where personal reflection and exploration are encouraged, support in students an internal perceived locus of causality, an experience of volition and a sense of choice. Since such teaching style satisfies the basic needs of autonomy and competence, students can get autonomous motivated to study with long-term acquired competencies as result (Reeve, 2009).

In contrast, a controlling teaching style that is characterized by impatience and pressure to rigidly think, feel or behave in a specific way, frustrate the basic psychological needs. It undermines positive functioning and outcomes because it induces in students an external perceived locus of causality and a sense of obligation to others or to one's own negative emotion (Reeve, 2009). Therefore, controlling teaching is related to lower quality motivational styles, but can also influence fear of failure, negative self-worth and challenge avoidant behavior (Bartholomew et al., 2017).

Aim of this study: The aim of this study was to investigate in a Belgian student sample how the satisfaction and frustration of the basic psychological needs could influence their general well-being and study motivation. Moreover it was explored whether teacher styles could impact these basic needs. More specifically, the following research questions were investigated: 1. Do need satisfaction and need frustration predict students' positive or negative affect? 2. Do need satisfaction and need frustration predict the quality of students' motivation? and 3. Is there an effect of teaching style on need satisfaction and frustration in students?

METHOD

Sample and procedure: The sample consisted of 102 Belgian first year college students in Applied Psychology. The mean age of the sample was 19 years old (SD= 2.58; range = 17-35 years). The sample was 79.40% female. Students were asked to fill in an online questionnaire at the start of the academic year. Prior to the assessment, all participants were made aware of the voluntary nature of the study and their anonymity was guaranteed. Online informed consent was obtained from all participants.

Measures: Need satisfaction and frustration-Satisfaction and frustration of students' need for autonomy, relatedness and competence was assessed using the full 24- item Basic Psychological Need Satisfaction and Frustration Scale (BPNSNFS; Chen et al., 2015). An example for autonomy satisfaction is 'I feel a sense of choice and freedom in the things I undertake'.Two need composite scores were created by computing the average of the three separate need satisfaction scores and by computing the average of the three separate need frustration scores.

Positive and negative affect-Students' affect was measured with the PANAS (Positive And Negative Affect Scale; Watson et al., 1988). The PANAS measures positive and negative effect on two 10-item scales with emotional adjectives (e.g., 'strong').

Study motivation - Students completed an adapted Dutch version of the Self-Regulation Questionnaire Academic (SRQ-A; Ryan & Connell, 1989; Vansteenkiste et al., 2009) to measure quality of study motivation. In the scale, 8 items to assesses students' autonomous motivation. Four of them assessed intrinsic motivation (e.g. "I'm studying because I enjoy doing so") and identified motivation (e.g. "I'm studying because I want to learn new things"). Also controlled study motivation was assessed with 8 items: Four items assessed introjected motivation (e.g., I'm studying because I would feel ashamed if I wouldn't do so") and four items captured extrinsic motivation (e.g. "I'm studying because others (parents, friends, teachers etc.) oblige me to do so"). All items were scored on a 1 (completely disagree) to 5 (completely agree) Likert scale.

Teaching style -Students' perception of teaching style is measured with the Teacher As Social Context Questionnaire (TASCQ; Belmont, Skinner, Wellborn, & Connell, 1988). We used the subscales Autonomy support (eight items; e.g. 'My teacher gives me a lot of choices about how to do my schoolwork'), Structure (eight items; e.g. 'My teacher shows me how to solve a problem independently') and Involvement (eight items; e.g. 'My teacher likes me.'). Scale scores were calculated by averaging the items within the scale (negative items were reverse coded).

RESULTS

Research question 1: Do need satisfaction and need frustration predict students' affect?

Need satisfaction significantly predicted more positive affect in students (β= .63, p<.01) and less negative affect (β=-.22 , p<.05). Further, need frustration predicted more negative affect (β=.48; p<.01) and less positive affect (β= -.30, p<.01).

Research question 2: Do need satisfaction and need frustration predict the quality of students' motivation?

The students scored highest on autonomous motivation (*M* = 3.50, *SD* = 0.68), more specifically on identified motivation (*M* = 4.15, *SD* = 0.70). As expected, they scored the lowest on extern motivation (*M* = 2.34, *SD* = 0.81), although this was not extremely low as could have been expected at the beginning of an educational program students had chosen themselves.

To explore the relationship between the psychological needs and the quality of students' motivation regression analyses were conducted. Need frustration predicts more controlled motivation (β=.32, p<.05), but it does not predict autonomous motivation. On the contrary, need satisfaction predicts more autonomous motivation (β =.43, p<.05) but not controlled motivation.

Research question 3: Is there an effect of teaching style on need satisfaction in students?

Regression analyses were performed to examine the effects of teaching style on need satisfaction and need frustration in first year students. The results showed that an autonomy-supportive teaching style predicts more need satisfaction in students (β =.47, p <.01). Furthermore, providing structure (β= .29, p< .01) and creating a warm environment (β=.23, p<.05) also predicted more need satisfaction in students. Next, autonomy support and structure predicted less need frustration (β= -.28, p<.01, and β= -.29, p<.05 respectively). Teacher involvement did not significantly predict need frustration.

DISCUSSION

The present study addressed the question how the satisfaction of the basic psychological needs could influences student's general well-being and study motivation. Moreover, it was investigated whether teaching style could satisfy or thwart students' needs.

In line with the literature, satisfaction of the basic psychological needs of autonomy, relatedness and competence, predicted positive affect and higher quality of study motivational styles. Also in line with other

studies, our findings showed that an autonomous-supportive teaching style is of very importance for student's self-regulated motivation, since it satisfies the basic psychological needs. Undoubtedly, this study has some limitations. First, the positive or negative affect reflects only a narrow part of the broad construct of 'well-being'. Nevertheless, it gives some indication of the positive or negative mood, and thus a quick scan of general well-being (see also Busseri, 2018).

Second, we only assessed motivational type at the start of the academic year. It is at least remarkable that the students mean controlled motivation is still around the average on the 1-5 Likert scale. It would be worthwhile to investigate longitudinally whether these results change during the student's further academic career and how they correlate with other constructs as fear of failure, coping strategies, study styles and study dropout.

CONCLUSION

Nevertheless, the results we found in a Belgian study context confirm the universality claim of SDT, and the importance of the satisfaction of the basic psychological needs. To stress the importance of an adequate teaching style, we conclude with Reeves (2009) recommendations to elicit self-regulated study motivation in students: start from the students' perspective, display patience to allow time for learning, nurture inner motivational resources, provide explanatory rationales, rely on non-controlling language and acknowledge and accept expressions of negative effect.

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